

Rejection Under 35 U.S.C. § 103(a)

Claims 1-8, 10 and 14 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Peiffer et al. '758 or Peiffer et al. '288 or Peiffer et al. '916. This rejection is respectfully traversed.

Claims 1-4 and 14 of the present invention are directed to a polymer comprising a) APTAC or MAPTAC alone or in combination, and b) acrylic acid, methacrylic acid, AMPSA or MAMPSA, alone or in combination. Claim 10 is directed to a cosmetically acceptable medium containing such a polymer.

Claims 5-8 are directed to a polymer which additionally comprises a C₁-C₂₂ straight or branched chain alkyl acrylate or alkyl methacrylate.

All three of the Peiffer references cited against these claims teach terpolymers. More specifically, the references disclose terpolymers of acrylamide, metal styrene sulfonate, and MAPTAC. The terpolymers disclosed by Peiffer are reported as having viscosity-polymer concentration relationships that are invariant with the addition of high levels of acid, base, or salt to a fresh water system. Peiffer does not teach or enable the polymers of the present invention. Nor does Peiffer remotely suggest a cosmetically acceptable medium containing 0.1 to 2.0 weight percent of these polymers. Finally, Peiffer does not teach polymers having properties that are desirably in the treatment of keratin-containing substrates.

The Office Action indicates that the arguments made by Applicants in the Amendment and accompanying Declaration in the parent case were not persuasive. More specifically, the Office Action maintains the position that polymers comprising APTAC/MAPTAC and AA/MA or a sulfonic acid would have been obvious in light of Peiffer. Peiffer, however, does not teach or suggest such a polymer. Peiffer only teaches and enables a polymer having three mer units--acrylamide, sodium styrene sulfonate and MAPTAC, never teaching or suggesting polymers having more or less than 3 mer units. In contrast, Claims 1-4 and 14 read on a polymer having two mer units (a copolymer) wherein one mer unit is APTAC, MAPTAC, or a combination thereof and the second mer unit is acrylic acid, methacrylic acid, AMPSA, MAMPSA, or combinations thereof, and would also cover a polymer having more than these two mer units, as indicated by the open-ended language "comprising". Applicants' Claims 1-4 and 14, therefore, cover copolymers, terpolymers, and polymers having more than three mer units. In

contrast, the Peiffer references do not teach copolymers or polymers having more than three mer units; Peiffer teaches only terpolymers. While Claims 5-8 read on terpolymers and polymers having more than three mer units, Applicants submit that these polymers are not taught by Peiffer.

Peiffer does little more than recite a laundry list of anionic, cationic, and nonionic mer units that he "envisions" as being within the scope of his invention. (See, for example, Peiffer '288, column 6, lines 16-34.) Recitation of a laundry list of mer units, however, does not render the present invention obvious. The CCPA has clearly stated that "the mere naming of a compound in a reference, without more, cannot constitute a description of the compound" (See, *In re Wiggins, James and Gittos*, 179 U.S.P.Q. 421, 425 (CCPA, 1973), a copy of which is enclosed.) The Court continued:

If we were to hold otherwise, lists of thousands of theoretically possible compounds could be generated and published which, assuming it would be within the level of skill in the art to make them, would bar a patent to the actual discoverer of a named compound no matter how beneficial to mankind it might be. In view of the fact that the purpose sought to be effectuated by the patent law is the encouragement of innovation, such a result would be repugnant to the statute.

Id. at 425.

Applicants respectfully submit that the Peiffer references do not fairly suggest the polymers of the present invention to one skilled in the art. As in the *Wiggins* case, the Peiffer patents merely list possible components of compounds without more. The references provide no teaching of the ratios of mer units in these polymers as recited, for example, in Claims 1-8 and 14. Nor do the Peiffer references teach the properties of the polymers of the present invention. Furthermore, none of the Peiffer references even remotely suggest a cosmetically acceptable medium containing a polymer comprising components a) and b), as they are described above. All of the Peiffer references appear to be directed to polymers having industrial applications.

In addition, Applicants have provided evidence that the polymers of the present invention have properties that could not have been predicted from the reference. Such a showing of unexpected results is sufficient to overcome *prima facie* obviousness. The CCPA has clearly held that unexpected characteristics of

compounds can render otherwise similar compounds unobvious over cited art. (See, for example, *In re Papesch*, 137 U.S.P.Q. 43 (CCPA, 1963), a copy of which is enclosed.) In the *Papesch* case, compound claims were rejected in light of art which taught homologs of these compounds. In response, the applicants provided evidence that their compounds had a property which the art compounds did not. The Patent Examiner there, in a final rejection, deemed the evidence presented by applicants to be "irrelevant" because the affidavit was directed to uses for the compound, stating that "The obvious compound is not made less obvious by its properties in an art use." *Id.* at 45. In overturning this rejection, the CCPA noted that "a compound and all of its properties are inseparable; they are one and the same thing. . . . There is no basis in law for ignoring any property in making . . . a comparison" between a claimed compound and a compound cited in a reference. *Id.* at 51. The *Papesch* case cites numerous additional cases in which claims to compounds were deemed patentable over cited art because the claimed compounds possessed properties not possessed by the art-disclosed compounds. Here, Applicants have provided declaratory evidence showing that their polymers exhibit properties that other polymers do not have, including other polymers that contain mer units in the Peiffer lists. These unexpected properties contribute to the patentability of the present claims, and serve to distinguish the compounds of these claims over the cited references.

More specifically, the Declaration shows that terpolymers within the claims of the present invention have enhanced hair care properties when compared with other terpolymers; some of these other terpolymer comprise the mer units listed by Peiffer in his laundry lists. Thus, certain combinations of mer units, claimed by Applicants, have the unexpected property of being useful in treating keratin-containing substrates, while other combinations do not. Because of this result, Peiffer cannot fairly be said to teach polymers having these unexpected properties; moreover, these unexpected properties could not have been predicted based on the teachings of Peiffer.

The Office Action notes, incorrectly, that:

The Declaration is not commensurate in scope with the claims. The claims are directed to polymers. The Declaration is not directed to the properties of the claimed polymers per se. The Declaration appears to be directed to the properties of a shampoo which

comprises a polymer. Properties of a shampoo are not at issue. Applicants have not presented any claims directed to a shampoo.

Office Action at pages 2-3.

Paragraph 7 of the Declaration provides results of detangling performance of an aqueous system comprising the terpolymers of the present invention; these terpolymer solutions are not shampoos. Thus, not all of the evidence presented in the Declaration relates to shampoo systems. Other paragraphs, specifically 8 and 9, relate to the terpolymers of the present invention in a standard shampoo system, and their performance in relation to other terpolymers. Claim 10, however, is clearly directed to a cosmetically acceptable medium containing these polymers; page 1, lines 22-23 clearly state that the cosmetically acceptable medium can be shampoo. Thus, the properties of a shampoo *are* at issue, as Applicants have at least one claim that includes a shampoo embodiment (as well as other embodiments). Thus, several of the comments made regarding the Declaration are erroneous. Moreover, these comments would appear to ignore the standard expressed in the *Papesch* case--that properties of compounds are to be considered in evaluating the patentability of those compounds. The ability to treat keratin-containing substrates is a property of the polymers of the present invention, and should be considered, particularly since Peiffer is totally silent as to such a quality in his compounds. This unexpected property can be demonstrated in any manner, such as by the use of incorporation into shampoos, other cosmetically acceptable medium, or in aqueous solutions. Regardless of how these examples are presented, they demonstrate the unique and unexpected properties of the particular polymers recited in Claims 1-8 and 14 that are not taught or suggested by the art.

The Office Action also states that "The Declaration does not contain any evidence directed to polymers of APTAC or MAPTAC and either acrylic acid, methacrylic acid or the particular sulfonic acid according to the Peiffer reference." Here, Applicants have shown that their terpolymers have superior properties when compared with other terpolymers, including other terpolymers whose mer units are listed in the Peiffer patents. Thus, data has been presented which shows that the claimed invention has unexpected properties that the art does not have. Applicants do not have to present evidence relating to all of the terpolymer combinations which could be made based on Peiffer's lists; such a showing would place an undue

burden on Applicants. For all of the above reasons, Applicants submit that the Declaration provides evidence that clearly renders the present compounds patentable over the art, and that the discounting of this evidence was improper.

In addition, Applicants submit herewith additional data in a Declaration executed by Richard Lamar showing that the terpolymers of the present invention, namely a terpolymer comprising acrylic acid, MAPTAC, and methyl acrylate in a 45:45:10 ratio improves the wet combing abilities of various commercially available relaxers. Thus, the present terpolymers are further demonstrated to possess properties not taught or suggested by the references.

Finally, Applicants respectfully submit that the Peiffer references are not appropriately cited under 35 U.S.C. § 103 as they are directed to nonanalogous art. To be appropriately cited under this statute, and to render an invention obvious, a particular reference relied upon must constitute "analogous art". (See, for example, *In re Clay*, 966 F.2d 656, 658-59; 23 U.S.P.Q.2d 1058, 1060-61 (Fed. Cir. 1992), a copy of which is enclosed.) As described in the *Clay* case, a two-prong test should be used to determine whether a reference is analogous prior art; one should look to whether the art is in the same field of endeavor and, if not, whether the reference is reasonably pertinent to the problem with which the inventor is involved. Here, neither of these prongs are met. The patents of Peiffer are clearly not in the same field of endeavor as the present invention; nor are the references reasonably pertinent to the problem with which the current invention is directed. The Peiffer references are directed to a particular terpolymer having industrial applications such as use in drag reduction agents. One skilled in the art of cosmetic formulations and uses thereof would not have looked to references reciting viscosity agents used in industrial systems for polymers for treating keratin-containing substrates. The "polymer" field is incredibly broad; countless industries use countless polymers in countless applications, but these industries and applications would not necessarily be in the same fields, or even in remotely related fields. Just because the present case and the Peiffer references both broadly deal with polymers, therefore, does not make them analogous art. The fundamental polymer science used in cosmetic formulation relates to the colloidal interaction between keratin-containing substrates and polymers; principles involved in drag reduction would have no bearing on the present invention.

Double Patenting Rejection

Claims 1-8, 10 and 14 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 9 and 11-13 of co-pending application Serial No. 08/828,495. This rejection is respectfully traversed.

The Office Action states that while the conflicting claims are not identical, they are not patentably distinct as the claims of each application "are directed to the same invention" The present invention, however, is directed to ampholyte polymers and cosmetically acceptable medium containing the same; the '495 patent is directed to methods for treating a keratin-containing substrate. Applicants submit that the subject of the claims of each application are therefore not directed to the same invention. Moreover, if the subject matter of the two groups of claims were not patentably distinct, then Applicants submit that all fourteen of the claims, as originally filed, should have been allowed in the parent case, instead of just the method claims.

The Office Action suggests that a terminal disclaimer be submitted to obviate the double patenting rejection. Applicants submit that this is unnecessary. Regardless of whether the present case is a divisional case or a continuation case, the filing date of the present invention is the same as the filing date of the parent case. As such, both cases will expire on the same day, 20 years from the filing date. Filing a terminal disclaimer to this effect would be redundant. In an effort to advance this case to allowance, however, Applicants will submit a terminal disclaimer if it is still deemed necessary by the Examiner.

Summary

Applicants respectfully submit, for all of the above reasons, that Claims 1-8, 10 and 14 are patentable over the art of record. The references do not teach one skilled in the art how to make the polymers of the present invention, and do not remotely suggest the unexpected properties of these polymers. Applicants submit that the pending claims are patentable, and a Notice of Allowance is respectfully requested at an early date.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Diane R. Meyers", followed by a large, stylized circular flourish.

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